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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,409	02/20/2004	Sven Bulow	KLAUS2.005AUS	6350

20995 7590 04/30/2008  
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EXAMINER
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JUNG, UNSU

ART UNIT	PAPER NUMBER
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1641

NOTIFICATION DATE	DELIVERY MODE
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04/30/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/783,409	<b>Applicant(s)</b> BULOW, SVEN	
	<b>Examiner</b> Unsu Jung	<b>Art Unit</b> 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendments in the reply filed on January 22, 2008 have been acknowledged and entered. The reply included amendments to the specification and claims 1 and 4.
2. Claims 1-6 are pending and under consideration for patentability under 37 CFR 1.104.

### ***Objections Withdrawn***

3. The objection of the drawings has been withdrawn in view of amended specification in the reply filed on January 22, 2008.

### ***Rejections Withdrawn***

4. The following rejections have been withdrawn in view of amended independent claim 1 in the reply filed on January 22, 2008.
  - Rejection of claims 1 and 6 under 35 U.S.C. 102(b) as being anticipated by Vann et al. (U.S. PG Pub. No. US 2002/0015666 A1, Feb. 7, 2002); and
  - Rejection of claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vann et al. (U.S. PG Pub. No. US 2002/0015666 A1,

Feb. 7, 2002) in view of Mainquist et al. (U.S. Patent No. 6,534,014, published on Mar. 18, 2003 and filed on May 11, 2000).

### ***Specification***

5. The disclosure is objected to because of the following informalities: on p10, paragraph [0043], close parenthesis and an extra period in the last line of the paragraph should be deleted.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3 and all dependent claims thereof, the terms “probe” and “probe pool” in line 2 is vague and indefinite. It is unclear whether or not the terms “probe” and “probe pool” of claim 3 refer to “probe carrier” of claim 1. For the purpose of examination, the terms “probe” and “probe pool” of claim 3 has been interpreted as being referring to “probe carrier” of claim 1.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kroy et al. (U.S. Patent No. 5,252,294, Oct. 12, 1993) (hereinafter “Kroy”).

Kroy anticipates instant claims by teaching a chamber array arrangement for performing screening assays comprising a container (a plate) having at least two chambers (plate has depressions which can be tapering circular wells, column 3, lines 9-15), wherein in a particular chamber at least one probe carrier is present (wells appear to contain various reagents, including reagents with carriers, column 4, lines 31-41), wherein the probe carrier is essentially freely movable (separable, column 4, lines 31-41) in said particular chamber and wherein the container is provided with a circular bottom having a surface area which is smaller than the bottom surface area of a well of a microtiter plate (column 3, lines 9-15).

With respect to claim 2, Kroy teaches that the chamber array arrangement further comprising a cover arranged on one or more of the two chambers (reference element 3 in Fig. 3).

With respect to claim 3, Kroy teaches a cover made from a non-bonding material (semiconductor material, column 2, lines 35-46), which allows probe or probe pool to be retained completely in the chamber.

With respect to claim 5, the cover of Kroy is removable (Fig. 1).

With respect to claim 6, Kroy teaches that the chamber array arrangement further comprises a carrier having a location adapted to receive the container (Fig. 14).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable Kroy et al. (U.S. Patent No. 5,252,294, Oct. 12, 1993) (hereinafter "Kroy") in view of Mainquist et

al. (U.S. Patent No. 6,534,014, published on Mar. 18, 2003 and filed on May 11, 2000) (hereinafter "Mainquist").

Kroy teaches a chamber array arrangement for performing screening assays as set forth above. Although Kroy teaches a cover, which would allow to retain the probe or probe pool essentially completely in the respective chamber, Kroy fails to teach a chamber array arrangement, wherein the cover being a membrane having a pore size smaller than the size of the probe carrier with the probe attached or of the free probe.

Mainquist teaches a specimen plate lid (cover) that provides enhanced sealing and provides increased efficiency in placement on a specimen plate or removal from a specimen plate (see entire document, particularly column 2, lines 10-14). It is known to provide a lid to cover a specimen plate (column 1, lines 44-55). For example, the samples in the wells may need to incubate or it may be desired to store the samples for an extended period of time (column 1, lines 44-49). By covering the wells, contamination and evaporation may be reduced (column 1, lines 44-49). It is an advantage of specimen plate lid that it can be accurately and relatively efficiently positioned on a specimen plate (column 2, lines 52-54). Since the lid and its compressible seal alone provide a good barrier between the specimen plate wells and the outside environment, additional mechanical and adhesive sealing is not required (cover made from a non-bonding material, column 2, lines 54-57). The specimen plate lid is well suited for handling by a robotic material handling system. Since the lid is self-sealing with specimen plate, operator intervention is not required to mechanically seal

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the plate (column 2, lines 65-67). With respect to claim 4, Mainquist teaches a membrane cover having an adjustable permeability (a pore size, column 7, lines 49-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ a cover of Mainquist on the chamber array arrangement of Kroy in order to prevent contamination and evaporation in the wells of the chamber array arrangement. The advantage of a chamber array arrangement cover comprising a non-bonding material, which can be accurately and relatively efficiently positioned on the chamber array arrangement without additional mechanical and adhesive sealing, provides the motivation to employ a cover of Mainquist et al. on the chamber array arrangement of Kroy with a reasonable expectation of success since the cover of Mainquist can be used for chamber array arrangement in multi-well plate format. Further, Mainquist also teaches that the cover provides a good barrier between the specimen plate wells and the outside environment (column 2, lines 54-57) to reduce contamination and evaporation (column 1, lines 44-49). Therefore, one of ordinary skill in the art at the time of the invention would recognize that the permeability (pore size) of the membrane cover of Kroy would intrinsically have a size smaller than the size of the probe carrier contained in the chambers of the chamber array arrangement since the membrane cover serves as a barrier between specimen plate wells/chambers in order to reduce contamination and evaporation.

### ***Response to Arguments***

#### **13. Objection of the specification**



Although Applicant asserts that the specification in paragraph [0043] has been amended to address informalities noted by the Examiner in the specification, the close parenthesis and an extra period in the last line of the paragraph [0043] has not been deleted. Therefore, the objection of the specification as set forth above has been maintained.

14. Rejection of claims 3 and 4 under 35 U.S.C. 112, second paragraph

The rejection of claim 3 regarding "non-bonding material" and claim 4 regarding "probe carrier means" under 35 U.S.C. 112, second paragraph as set forth in the previous Office Action dated July 20, 2007 has been withdrawn in view of amended specification and claim 4 in the reply filed on January 22, 2008. However, Applicant did not address the rejection of claim 3 under 35 U.S.C. 112, second paragraph regarding the terms "probe" and "probe pool" as set forth in the previous Office Action dated July 20, 2007. Therefore, the rejection of claim 3 and its dependent claim 4 has been maintained as set forth above.

15. Prior art rejections

Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Since the prior art fulfills all the limitations currently recited in the claims, the invention as currently recited would read upon the prior art.

***Prior Art of Record***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Matkovich et al. (U.S. Patent No. 4,828,386, May 9, 1989) teaches a chamber array arrangement for performing screening assays (see entire document) comprising a container (unitary insert) having at least two chambers (Fig.'s 1-6), wherein in a particular chamber at least one probe carrier is present (reagent-carrying beads, p5, paragraph [0073]) and wherein the container is provided with a circular bottom having a surface area which is smaller than the bottom surface area of a well of a microtiter plate (Fig.'s 1-5). However, the probe carrier of Matkovich et al. is immobilized on the chamber and not freely movable in the chamber.
- Lee et al. (U.S. Patent No. 5,326,533, July 5, 1994) teaches a dialysis apparatus including a multi-well plate, a separation membrane and a template having holes which mate with the wells (see entire document, particularly Fig. 3).
- Gamble (U.S. Patent No. 6,106,783, Aug. 22, 2000) teaches a microplate assembly comprising microplate base having an array of wells and vials inserted into the wells (see entire document, particularly Abstract and Fig. 9).
- Gubernator et al. (U.S. Patent No. 6,436,351 B1, Aug. 20, 2002) teaches a microtiter reaction system comprising a support rack having an array of

reaction wells disposed in the support rack (see entire document, particularly Abstract and Fig.'s 1, 8, 9, and 11).

- Turner et al. (U.S. Patent No. 6,528,302 B2, Mar. 4, 2003) teaches a thin-well microplate comprising a plurality of sample wells placed on a planar surface (microtiter plates, see entire document, particularly Fig. 1).
- Robbins (U.S. Patent No. 5,916,526, June 29, 1999) teaches a multi-well container (chamber array arrangement) comprise of a rectangular array of tubes in standard multi-well plate tube array format (see entire document, particularly Abstract). The multi-well container of Robbins have tubes (chambers) with circular bottom, which is tapered (Fig.'s 1 and 2), in standard multi-well/microtiter plate format.
- Chandler ( WO 01/14589 A2, Mar. 1, 2001) teaches an array comprising a plurality of fluorescently addressable microparticles, each stained with at least two fluorescent dyes and is spatially arrayed in a two-dimensional pattern over a plane of a microtiter plate (see entire document, particularly p9, lines 3-14). The identification by location allows the simultaneous processing and screening of a large number of samples (p9, lines 3-14).

### ***Conclusion***

17. No claim is allowed.

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18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Unsu Jung whose telephone number is (571)272-8506. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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